

### Abstract of Disclosure

An optical transmission line according to the present invention is an optical transmission line which is able to control both the waveform distortion due to the non-linearity phenomenon and the waveform distortion due to dispersion. The optical transmission line is formed by connecting, in series, the first optical fiber (8), of which the dispersion value in the set wavelength band within the  $1.5\mu\text{m}$  wavelength band is 6 to 14 ps/nm/km, and the second optical fiber (9), of which the dispersion value in said set wavelength band is -14 to -6 ps/nm/km. The dispersion slopes of the first optical fiber (8) and the second optical fiber (9) are of mutually opposite symbols. Light transmitted from an optical transmitter (11) enters the first optical fiber (8) and light which has been transmitted through the first optical fiber (8) enters the second optical fiber (9). The absolute value of the dispersion in the  $1.5\mu\text{m}$  wavelength band of each of the optical fibers (8) and (9) is set to be 6 ps/nm/km or more so as to control the four light wave mixture and said absolute value is set to be 14 ps/nm/km or less so as to control a local dispersion, in order to set at approximately zero, for the entire optical transmission line, both the dispersion value and the dispersion slope in said set wavelength band.